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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,760

07/12/2006

Mikito Nishii

128673

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25944 7590 06/04/2008

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EXAMINER

GREEN, ANTHONY J

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

06/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,760	Applicant(s) NISHII ET AL.	
	Examiner Anthony J. Green	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-22 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-14 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 13-14 and 20-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/12/06 & 3/5/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. The preliminary amendment submitted on 12 July 2006 has been entered. New claims 9-22 have been added and accordingly claims 9-22 are currently pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Turcotte et al (US Patent No. 6,290,870 B1).

The reference teaches, in the abstract and the claims, an acid based antifreeze coolant formulation for heavy duty applications such as diesel engines comprising a. a major amount of a water soluble liquid alcohol freezing point depressant; b. from about 0.1 to about 10.0 weight percent of a monobasic carboxylic acid compound or the alkali metal salt thereof; c. a nitrate salt which is at least one selected from the group consisting of sodium nitrate, potassium nitrate, magnesium nitrate, calcium nitrate, lithium nitrate and combinations thereof in an amount of from 0.01 to about 10.0 percent by weight; d. a nitrite salt which is at least one selected from the group consisting of sodium nitrite, potassium nitrite, magnesium nitrite, calcium nitrite, lithium nitrite and

Art Unit: 1793

combinations thereof in an amount of from 0.001 to about 10.0 percent by weight; e. from about 0.01 to about 5.0 weight percent of an azole compound selected from the group consisting of tolyltriazole, hydrocarbyl triazole, benzotriazole, mercaptobenzothiazole, pyrazoles, isooxazoles, isothiazoles, thiazoles, thiadiazole salts, 1,2,3-benzotriazole, 1,2,3-tolyltriazole, sodium 2-mercaptobenzothiazole, and combinations thereof; and f. from about 0.001 to about 5.0 weight percent of a molybdate compound; g. a silicone-silicate copolymer in an amount of about 0.01 to about 10.0 percent by weight; and h. from about 0.001 to about 5.0 percent by weight of a polyvinylpyrrolidone. See also Table 1 which teaches various coolant formulations.

The instant claims are met by the reference. While the reference does not recite that the coolant is for a fuel cell this is an intended use and as such adds little or no patentable weight to the claim when the composition is the same. Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).

4. Claims 16-18 and 20-21 are rejected under 35 U.S.C. 102(a) as being anticipated by PCT International Application No. WO 03/106600 A1.

The reference teaches, in the abstract and the claims, a fluid composition comprising a fluid media such as oil or water and a selected amount of carbon

nanomaterials. The nanomaterials may be carbon nanotubes, bucky tubes etc. (see page 3 of the specification). The fluid may be used as a lubricant or a coolant.

The instant claims are met by the reference. While the reference does not recite that the composition is for a fuel cell this is an intended use and as such adds little or no patentable weight to the claim when the composition is the same. Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546). As for the use of fullerene, the references disclosure of the use of "carbon nanotubes" or "bucky tubes" meets this limitation as they are examples of fullerenes.

5. Claims 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorun (US Patent No. 5,324,495 A).

The reference teaches, in the claims, a method of making a metal fulleride composition comprising contacting a metal and a fullerene in a solvent in which the fullerene is soluble such as toluene, benzene etc.

The instant claims are met by the reference. While the reference does not teach that the composition is a coolant, if the composition is physically the same, it must have the same properties. It is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition

Art Unit: 1793

does not necessarily possess characteristics attributed to the CLAIMED composition. In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971) and also Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See also MPEP 2112.01 [R-3] I and II. Also while the reference does not recite that the composition is for a fuel cell this is an intended use and as such adds little or no patentable weight to the claim when the composition is the same. Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).

6. Claims 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. JP 5-117174 A.

The reference teaches, in the abstract, a method wherein fullerene is dissolved in toluene and is useful as a lubricant.

The instant claims are met by the reference. While the reference does not teach that the composition is a coolant, if the composition is physically the same, it must have the same properties. It is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. In

Art Unit: 1793

re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971) and also Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See also MPEP 2112.01 [R-3] I and II. Also while the reference does not recite that the composition is for a fuel cell this is an intended use and as such adds little or no patentable weight to the claim when the composition is the same. Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9-10, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder, Jr. (US Patent No. 5,723,059 A).

The reference teaches, in the abstract, a microencapsulated phase change material in a poly-alpha olefin fluid. Column 3, lines 4+, teach that the phase change materials may be paraffins, organic acids, hydrated inorganic salts etc.

The instant claims are obvious over the reference. While the reference does not specifically provide teach a coolant having a microencapsulated phase change material wherein the phase change material is an inorganic salt, it does teach that one may be formulated. It should be noted that "A reference can be used for all it realistically teaches and is not limited to the disclosures in its specific examples". See In re Van Marter et al 144 USPQ 421; In re Windmer et al 147 USPQ 518, 523; and In re Chapman et al 148 USPQ 711. Accordingly it would have been obvious to formulate a coolant having a microencapsulated inorganic salt in a nonaqueous base. Also while the reference does not recite that the composition is for a fuel cell this is an intended use and as such adds little or no patentable weight to the claim when the composition is the same. Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).

Claim Objections

9. Claims 13-14 and 20-21 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

It is not seen as to how the intended use of the composition further limits the composition itself.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16 the term "highly is a relative term which renders the claim indefinite. The term "highly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Allowable Subject Matter

12. Claims 15 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and provided that any 112 rejections are overcome.

Information Disclosure Statement

13. The remaining references have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

References Cited By The Examiner

14. The remaining references have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony J. Green/

Primary Examiner
Art Unit 1793

ajg
June 2, 2008